

ATTACHMENT 2

LFG MODEL



Project Number: 100245
Date: 9/9/2010
Prepared By: JJF
Checked By: MED
Approved By: PJS

Appendix C - Table 1
Central Maui Landfill
Phases I-II Acceptance Rates

Year	Waste Acceptance Rates (tons)	Cummulative Waste Acceptance Rates (tons)
1987	174,200	174,200
1988	174,200	348,400
1989	174,200	522,600
1990	174,200	696,800
1991	174,200	871,000
1992	198,621	1,069,621
1993	176,552	1,246,173
1994	145,901	1,392,074
1995	144,462	1,536,536
1996	140,269	1,676,805
1997	136,296	1,813,101
1998	143,965	1,957,066
1999	148,171	2,105,237
2000	150,417	2,255,654
2001	160,432	2,416,086
2002	168,817	2,584,903
2003	169,995	2,754,898
2004	180,041	2,934,939
2005	168,062	3,103,001

Notes:

- (1) Waste Tonnages were obtained from the tonnage report prepared by A-Mehr, Inc. in February 2007.



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Appendix C - Table 2
Central Maui Landfill
Phases IV-VI Acceptance Rates

Year	Waste Acceptance Rates (tons)	Cummulative Waste Acceptance Rates (tons)
2005	11,962	11,962
2006	189,091	201,053
2007	181,890	382,943
2008	170,334	553,277
2009	150,596	703,873
2010	147,969	851,842
2011	149,449	1,001,291
2012	150,943	1,152,234
2013	152,453	1,304,686
2014	153,977	1,458,664
2015	155,517	1,614,181
2016	157,072	1,771,253
2017	158,643	1,929,895
2018	160,229	2,090,125
2019	161,832	2,251,956
2020	163,450	2,415,406
2021	165,084	2,580,490
2022	166,735	2,747,225
2023	168,403	2,915,628
2024	170,087	3,085,715
2025	171,787	3,257,502
2026	173,505	3,431,007
2027	175,240	3,606,248
2028	176,993	3,783,240
2029	178,763	3,962,003
2030	180,550	4,142,553
2031	182,356	4,324,909
2032	184,179	4,509,088
2033	43,913	4,553,001

Notes:

- (1) Waste Tonnages for 2005-2006 were obtained from the tonnage report Prepared by A-Mehr, Inc. in February 2007.
- (2) Waste Tonnages for 2007-February 2010 were obtained from site waste intake records provided by Central Maui Landfill.
- (3) Waste Tonnages for 2010 were projected based on the previous 12 months waste intake average.
- (4) Waste intake rates from 2011 through 2033 were calculated based on 1% growth rate beginning in 2011.

Appendix C - Table 3
Central Maui Landfill
LFG Generation/Collection Estimates

Year	Phases I-II LFG Generation Rate (scfm)	Phases I-II LFG Collection Rate (scfm)	Phases IV-VI LFG Generation Rate (scfm)	Phases IV-VI LFG Collection Rate (scfm)	Combined LFG Generation Rate (scfm)	Combined LFG Collection Rate (scfm)
1987	0	0	0	0	0	0
1988	46	37	0	0	46	37
1989	92	73	0	0	92	73
1990	136	109	0	0	136	109
1991	179	144	0	0	179	144
1992	222	178	0	0	222	178
1993	270	216	0	0	270	216
1994	311	249	0	0	311	249
1995	343	274	0	0	343	274
1996	374	299	0	0	374	299
1997	403	323	0	0	403	323
1998	431	345	0	0	431	345
1999	460	368	0	0	460	368
2000	489	391	0	0	489	391
2001	519	415	0	0	519	415
2002	550	440	0	0	550	440
2003	583	466	0	0	583	466
2004	615	492	0	0	615	492
2005	650	520	0	0	650	520
2006	681	544	4	3	684	547
2007	666	533	61	45	726	578
2008	651	521	114	86	765	607
2009	637	510	163	122	800	632
2010	623	499	204	153	827	652
2011	610	488	244	183	853	671
2012	596	477	283	212	879	689
2013	583	467	322	241	905	708
2014	571	457	360	270	930	726
2015	558	447	397	298	956	745
2016	546	437	434	326	981	763
2017	534	427	471	353	1,005	781
2018	523	418	507	381	1,030	799
2019	511	409	543	407	1,055	816
2020	500	400	579	434	1,079	834
2021	489	391	614	460	1,103	852
2022	479	383	648	486	1,127	869
2023	468	375	683	512	1,151	887
2024	458	366	717	538	1,175	904
2025	448	358	750	563	1,199	921
2026	438	351	784	588	1,222	939
2027	429	343	817	613	1,246	956
2028	419	336	850	637	1,269	973
2029	410	328	882	662	1,292	990
2030	401	321	914	686	1,316	1,007
2031	393	314	946	710	1,339	1,024
2032	384	307	978	733	1,362	1,041
2033	376	301	1,009	757	1,385	1,058
2034	368	294	998	748	1,365	1,042
2035	360	288	973	730	1,333	1,017
2036	352	281	949	712	1,301	993
2037	344	275	926	694	1,270	970
2038	337	269	903	677	1,239	946

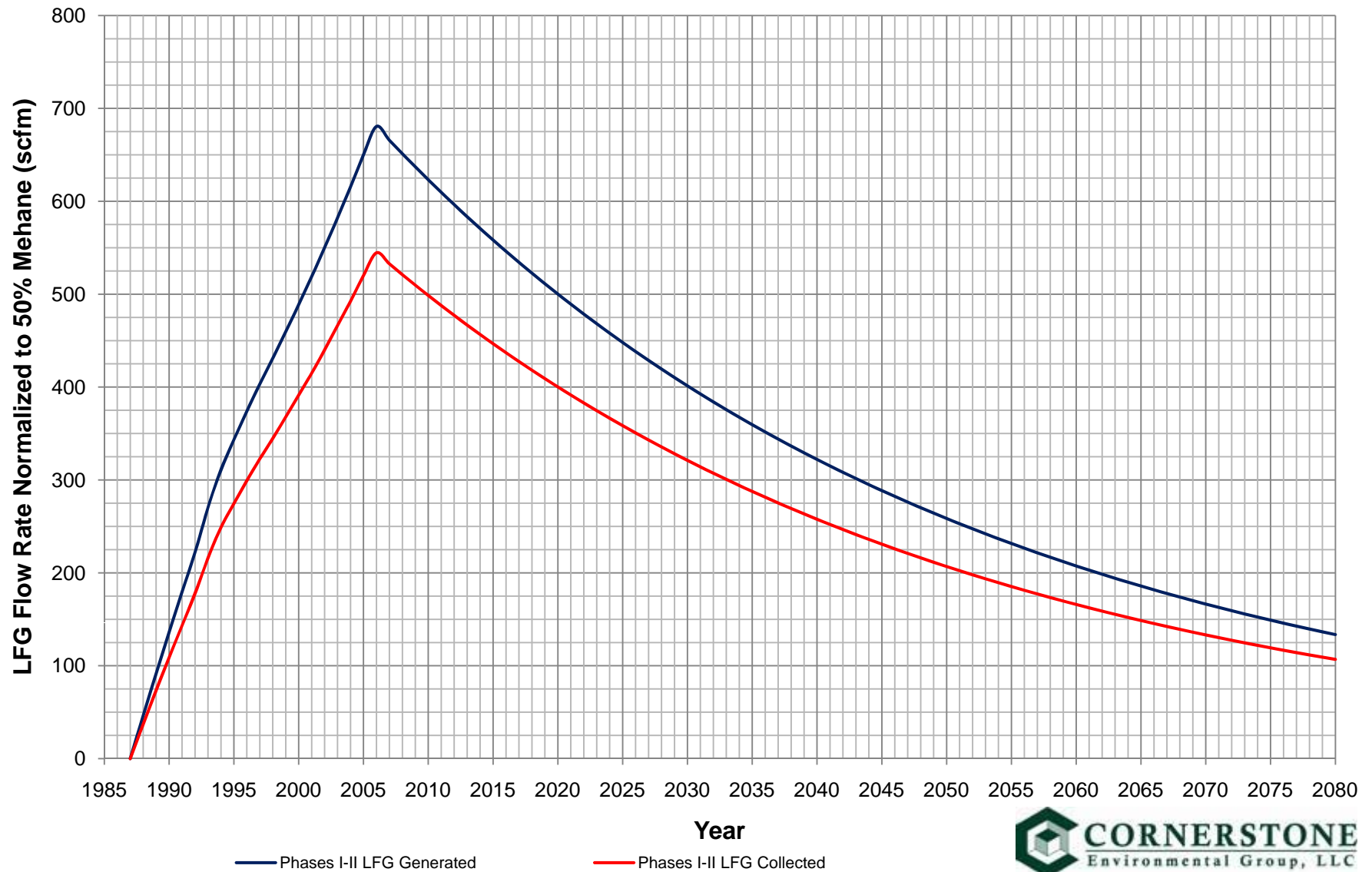
Appendix C - Table 3
Central Maui Landfill
LFG Generation/Collection Estimates

Year	Phases I-II LFG Generation Rate (scfm)	Phases I-II LFG Collection Rate (scfm)	Phases IV-VI LFG Generation Rate (scfm)	Phases IV-VI LFG Collection Rate (scfm)	Combined LFG Generation Rate (scfm)	Combined LFG Collection Rate (scfm)
2039	329	263	881	660	1,210	924
2040	322	258	859	644	1,181	902
2041	315	252	838	628	1,153	880
2042	308	247	817	613	1,125	859
2043	302	241	797	598	1,098	839
2044	295	236	777	583	1,072	819
2045	289	231	758	568	1,046	799
2046	282	226	739	554	1,021	780
2047	276	221	721	541	997	762
2048	270	216	703	527	973	743
2049	264	211	686	514	950	726
2050	259	207	669	502	927	708
2051	253	202	652	489	905	692
2052	247	198	636	477	884	675
2053	242	194	620	465	862	659
2054	237	189	605	454	842	643
2055	232	185	590	443	822	628
2056	227	181	576	432	802	613
2057	222	177	561	421	783	598
2058	217	173	548	411	764	584
2059	212	170	534	401	746	570
2060	207	166	521	391	728	557
2061	203	162	508	381	711	543
2062	199	159	495	372	694	530
2063	194	155	483	362	677	518
2064	190	152	471	353	661	505
2065	186	149	460	345	646	493
2066	182	145	448	336	630	482
2067	178	142	437	328	615	470
2068	174	139	426	320	600	459
2069	170	136	416	312	586	448
2070	166	133	406	304	572	437
2071	163	130	396	297	559	427
2072	159	127	386	289	545	417
2073	156	125	376	282	532	407
2074	152	122	367	275	520	397
2075	149	119	358	268	507	388
2076	146	117	349	262	495	379
2077	143	114	341	255	483	370
2078	140	112	332	249	472	361
2079	137	109	324	243	461	352
2080	134	107	316	237	450	344

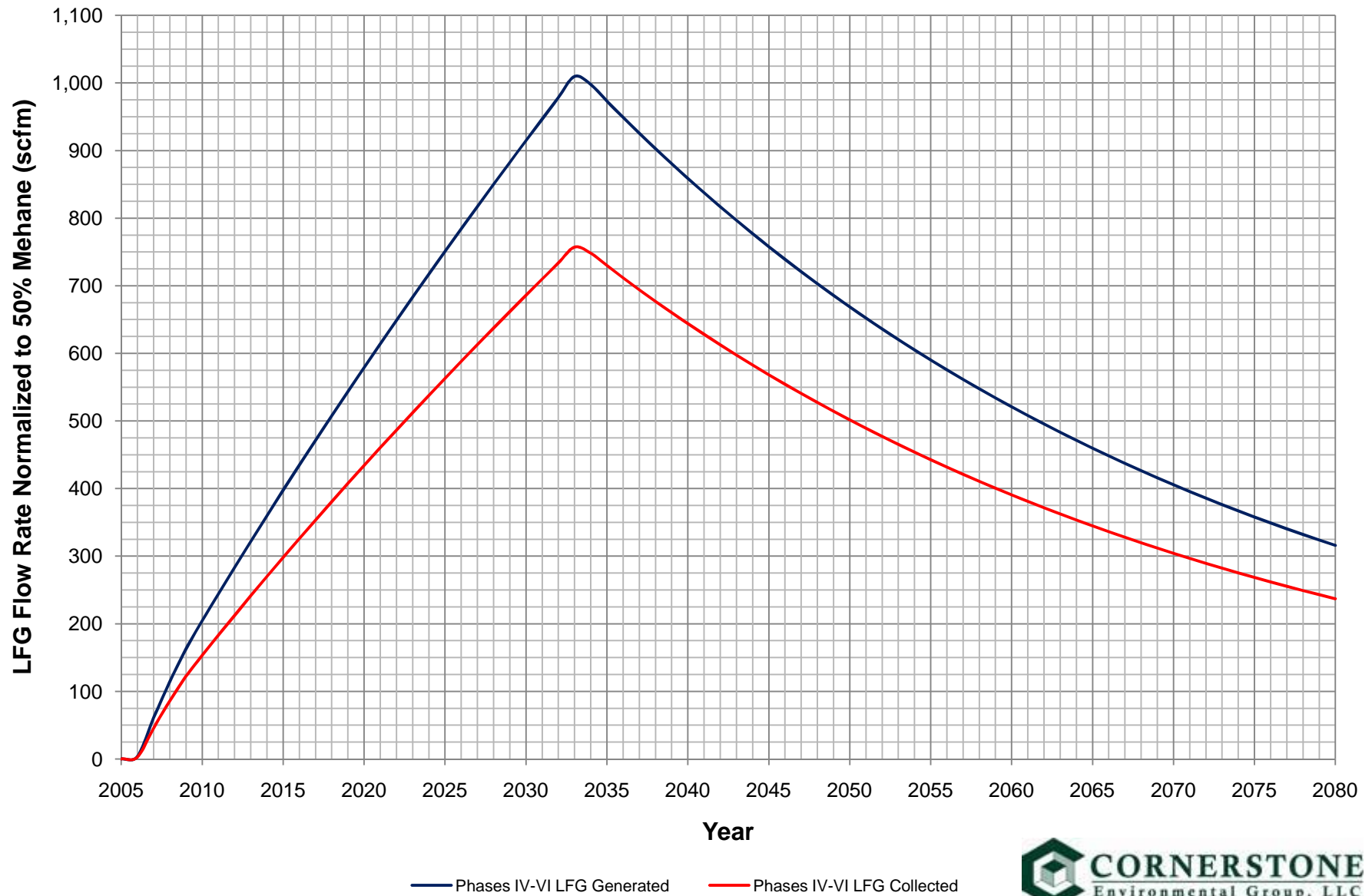
Notes:

- (1) scfm = standard cubic feet per minute
- (2) Phases I-II LFG generation rates assumed an $Lo = 100 \text{ m}^3/\text{Mg}$, and a k of 0.022/year.
- (3) Phases IV-VI LFG generation rates assumed an $Lo = 100 \text{ m}^3/\text{Mg}$, and a k of 0.025/year.
- (4) A collection efficiency of 80% was used for both Phases I-II and Phases IV-VI.
- (5) Actual LFG collection rates in 2010 for Phases I-II average 627 scfm @ 40% methane.
- (6) All LFG flow rates shown are normalized to 50% methane.

Appendix C - Figure 1
Phases I-II LFG Generation/Collection Estimate



Appendix C - Figure 2
Phases IV-VI LFG Generation/Collection Estimate



Appendix C - Figure 3
Phases I-VI LFG Generation/Collection Estimate

